

WHAT IS CLAIMED IS:

1. A method for community data caching comprising:
intercepting a request for content at a cache module;
determining a cache share responsible for the request,
5 the cache share being associated with a cache community;
determining whether the content associated with the
request is available at the cache share;

retrieving the content associated with the request from
the cache share when the content associated with the request
is available at the cache share; and

retrieving the content associated with the request from
an origin server when the content associated with the request
is unavailable at the cache share and storing the content
associated with the request retrieved from the origin server
15 at the cache share.

2. The method for community data caching according to
Claim 1 further comprising generating the cache community, the
cache community having a plurality of the cache shares.

3. The method for community data caching according to
Claim 2, wherein generating the cache community comprises:

determining the plurality of cache shares; and
associating a one of the cache shares with each of a
25 plurality of clients, the clients being associated with the
cache community.

4. The method for community data caching according to
Claim 3, wherein determining the plurality of cache shares
30 comprises determining a primary distribution of the requests,
each cache share representing a portion of the requests.

5. The method for community data caching according to Claim 4, wherein determining the plurality of cache shares further comprises determining a secondary distribution of the requests.

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6. The method for community data caching according to Claim 3, wherein the cache shares respectively comprise a plurality of Internet domain names starting with selected letters of the English alphabet.

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7. The method for community data caching according to Claim 3, wherein each cache share respectively comprises a plurality of Internet domain names.

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8. The method for community data caching according to Claim 3, wherein each cache share respectively comprises a set of Internet domain names.

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9. The method for community data caching according to Claim 3, wherein each cache share respectively comprises a plurality of content items associated with requests to be cached at a particular client associated with the cache community.

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10. The method for community data caching according to Claim 1 further comprising generating the request at a first client associated with the cache community, the cache community comprising the first client and a plurality of second clients distinct from the first client.

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11. The method for community data caching according to Claim 9, wherein determining a cache share responsible for the request comprises:

5 comparing the request to a location table associated with the cache module, the location table associating each cache share with a cache location, each cache location comprising a selected one of the second clients; and

determining which location is associated with the request in response to the comparison.

10 12. The method for community data caching according to Claim 1 further comprising collecting statistical information at the cache module, the statistical information being associated with a client associated with the cache module.

15 13. The method for community data caching according to Claim 1 further comprising determining a resource limit associated with the cache module.

20 14. The method for community data caching according to Claim 13, wherein the resource limit comprises a percentage of a resource associated with a client associated with the cache module and wherein the resource comprises any item selected from the group consisting essentially of processor time,
25 bandwidth, storage space and memory associated with the client.

30 15. The method for community data caching according to Claim 1 and further comprising storing content marked as cacheable at the cache module.

16. The method for community data caching according to Claim 1 and further comprising storing content unless the content is marked as non-cacheable at the cache module.

5 17. The method for community data caching according to Claim 16 and further comprising expiring content stored at the cache module using a content expiration protocol.

10 18. The method for community data caching according to Claim 17, wherein the content expiration protocol comprises the Internet Cache Synchronization Protocol.

19. The method for community data caching according to Claim 1 and further comprising:

15 determining whether the origin server is unable provide the content associated with the request;

attempting to retrieve the content associated with the request from the origin server until the origin server is able to provide the content associated with the request; and

20 retrieving the content associated with the request when the server is able to provide the content associated with the request.

25 20. The method for community data caching according to Claim 19, wherein determining whether the origin server is unable to provide the content comprises determining whether the origin server is busy.

30 21. The method for community data caching according to Claim 19, wherein attempting to retrieve the content is performed in the background.

22. A system for community data caching comprising:
a computer readable memory;
an application stored in the computer readable memory and operable to:

5 intercept a request for content at a cache module;
 determine a cache share responsible for the request,
the cache share being associated with a cache community;
 determine whether the content associated with the
request is available at the cache share;
10 retrieve the content associated with the request
from the cache share when the content associated with the
request is available at the cache share; and
 retrieve the content associated with the request
from an origin server when the content associated with the
15 request is unavailable at the cache share and storing the
content associated with the request retrieved from the origin
server at the cache share.

23. The system for community data caching according to
20 Claim 22, wherein the application is further operable to
generate the cache community, the cache community having a
plurality of the cache shares.

24. The system for community data caching according to
25 Claim 23, wherein the application, when generating the cache
community, is operable to:

 determine the plurality of cache shares; and
 associate a one of the cache shares with each of a
plurality of clients, the clients being associated with the
30 cache community.

25. The system for community data caching according to Claim 24, wherein the application, when determining the plurality of cache shares, is operable to determine a distribution of the requests, each cache share representing a
5 portion of the requests.

26. The system for community data caching according to Claim 24, wherein each cache share respectively comprises a set of Internet domain names.

27. The system for community data caching according to Claim 24, wherein each cache share respectively comprises a plurality of content items associated with requests to be cached at a particular client associated with the cache
10 community.
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28. The system for community data caching according to Claim 22, wherein the application is further operable to collect statistical information at the cache module, the
20 statistical information being associated with a client associated with the cache module.

29. The system for community data caching according to Claim 22, wherein the application is further operable to
25 generate the request at a first client associated with the cache community, the cache community comprising the first client and a plurality of second clients distinct from the first client.

30. The system for community data caching according to Claim 29, wherein the application, when determining a cache share responsible for the request, is operable to:

5 compare the request to a location table associated with the cache module, the location table associating each cache share with a cache location, the cache location comprising a selected one of the second clients; and

determine which location is associated with the request in response to the comparison.

10 31. The system for community data caching according to Claim 15, wherein the application is further operable to store content marked as cacheable at the cache module.

15 32. The system for community data caching according to Claim 22, wherein the application is further operable to store content unless the content is marked as non-cacheable at the cache module.

20 33. The system for community data caching according to Claim 32, wherein the application is further operable to expire content stored at the cache module using a content expiration protocol.

25 34. The system for community data caching according to Claim 33, wherein the content expiration protocol comprises the Internet Cache Synchronization Protocol.

35. The system for community data caching according to Claim 22, wherein the application is further operable to:

determine whether the origin server is unable provide the content associated with the request;

5 attempt to retrieve the content associated with the request from the origin server until the origin server is able to provide the content associated with the request; and

retrieve the content associated with the request when the server is able to provide the content associated with the request.

10 36. The system for community data caching according to Claim 35, wherein determining whether the origin server is unable to provide the content comprises determining whether the origin server is busy.

15 37. The system for community data caching according to Claim 35, wherein attempting to retrieve the content is performed in the background.

38. A method for community data caching comprising:

intercepting a request for content at a cache module, the cache module having an associated resource limit;

determining the resource limit associated with the cache module in response to an incentive;

determining a cache share responsible for the request, the cache share being associated with a cache community;

determining whether the content associated with the request is available at the cache share;

retrieving the content associated with the request from the cache share when the content associated with the request is available at the cache share; and

retrieving the content associated with the request from an origin server when the content associated with the request is unavailable at the cache share and storing the content associated with the request retrieved from the origin server at the cache share.

39. The method for community data caching according to Claim 38, wherein the resource limit comprises a percentage of a resource associated with a client associated with the cache module and wherein the resource comprises any item selected from the group consisting essentially of processor time, bandwidth, storage space and memory associated with the client.

40. The method for community data caching according to Claim 38, wherein the incentive comprises a financial incentive.

41. A system for community data caching comprising:
a computer readable memory;
an application stored in the computer readable memory and operable to:

5 intercept a request for content at a cache module,
the cache module having an associated resource limit;
 determine the resource limit associated with the
cache module in response to an incentive;
 determine a cache share responsible for the request,
10 the cache share being associated with a cache community;
 determine whether the content associated with the
request is available at the cache share;
 retrieve the content associated with the request
from the cache share when the content associated with the
15 request is available at the cache share; and
 retrieve the content associated with the request
from an origin server when the content associated with the
request is unavailable at the cache share and storing the
content associated with the request retrieved from the origin
20 server at the cache share.

42. The system for community data caching according to
Claim 41, wherein the resource limit comprises a percentage of
a resource associated with a client associated with the cache
25 module and wherein the resource comprises any item selected
from the group consisting essentially of processor time,
bandwidth, storage space and memory associated with the
client.

30 43. The system for community data caching according to
Claim 38, wherein the incentive comprises a financial
incentive.

44. A system for community data caching comprising:

means for intercepting a request for content at a cache module;

5 means for determining a cache share responsible for the request, the cache share being associated with a cache community;

means for determining whether the content associated with the request is available at the cache share;

10 means for retrieving the content associated with the request from the cache share when the content associated with the request is available at the cache share; and

15 means for retrieving the content associated with the request from an origin server when the content associated with the request is unavailable at the cache share and storing the content associated with the request retrieved from the origin server at the cache share.

45. A system for community data caching comprising:

means for intercepting a request for content at a cache module, the cache module having an associated resource limit;

5 means for determining the resource limit associated with the cache module in response to an incentive;

means for determining a cache share responsible for the request, the cache share being associated with a cache community;

10 means for determining whether the content associated with the request is available at the cache share;

means for retrieving the content associated with the request from the cache share when the content associated with the request is available at the cache share; and

15 means for retrieving the content associated with the request from an origin server when the content associated with the request is unavailable at the cache share and storing the content associated with the request retrieved from the origin server at the cache share.